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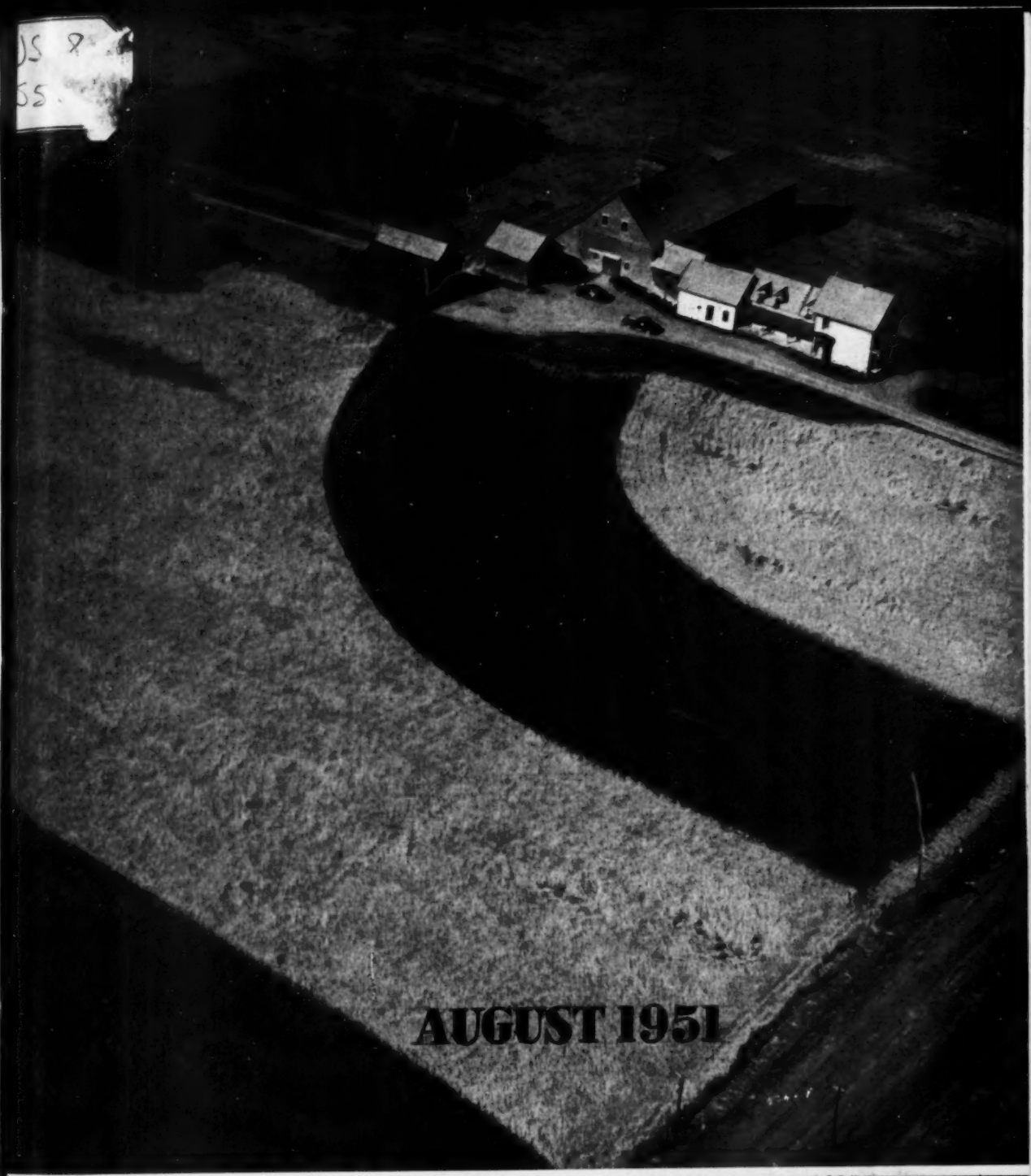

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☆ THIS MONTH ☆

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WELLINGTON BRINK
Editor
Art Work by
W. HOWARD MARTIN

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PASTURE FOR PIGEONS.—The Floyd County (Ind.) Soil Conservation District recently received a request from J. Wagoner Wayne of New Albany for help with a soil conservation plan to provide improved pasture and more wrinkled peas for a flock of 300 pigeons.

WIDENING THE CIRCLE.—Does group action pay? "Yes," answer District Conservationist Bud Gilbert, of Coeur D'Alene, Idaho, and Mel Carlson of his staff.

When Carlson started work about 5 years ago he began keeping record of the farmers he talked to and what he talked to them about. By early February this year Mel changed over to this new-fangled group-action approach. By late April he noticed that his record of farmer contacts had grown at an almost unbelievable rate. Out of curiosity, he and Gilbert sat down and went over the record. They discovered that in the 3 months Mel had seen more new farmers, and talked to more of them about conservation, than he had in the previous 5 years.

FRONT COVER.—This photograph by Gordon S. Smith shows some of the Ralph McAtee farm, located near Hodgdon, Maine. McAtee has been working in his soil conservation district since 1949. This picture, made in August last year, shows potatoes in dark strips, oats in light strips.

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LET'S TAKE A LOOK AT THE SOUTHERN HIGH PLAINS

By H. H. FINNELL

Editor's Note.—Mr. Finnell is widely regarded as the world's greatest authority on wind erosion and its control. A research specialist with the Soil Conservation Service, he makes his headquarters at the Panhandle A. & M. College, Goodwell, Okla. This article was suggested by a talk which Mr. Finnell made recently at a staff conference of the Secretary of Agriculture.

CONDITIONS in parts of the Southern High Plains are now beginning to make us ponder our errors of the past.

Southwest of Lubbock, Tex., we have a little Dust Bowl just old enough to pay half fare. In the arid margins of the wheat belt we are experiencing the first serious wind-erosion hazard since some of that land was plowed.

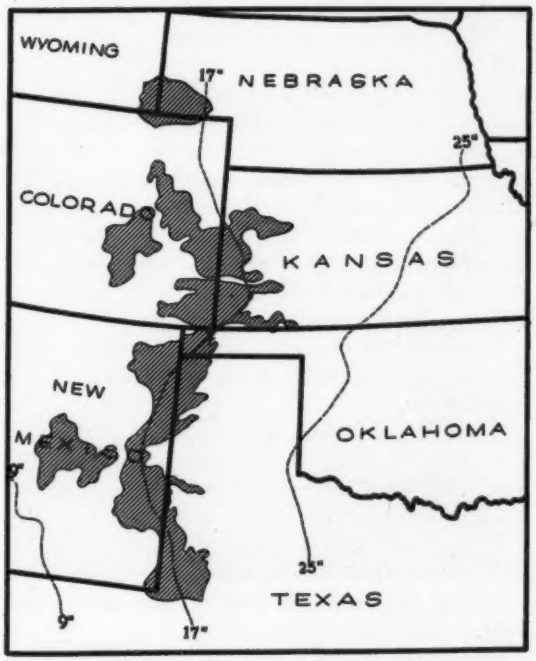
Both trouble spots are the direct result of breaking out low-capability lands. In the marginal Lubbock cotton area the soils are too sandy; in the marginal wheat area they are too shallow to stand the pressure of cultivation. Dust storms of the current season have come from both directions across the Panhandle of Oklahoma, where my headquarters is located.

According to experience, these soils are destined for early abandonment. Enforced abandonment in the past has been very wasteful. Voluntary retirement to grass is preferable as to long-time economy of soil resources.

The prospects of dust from the marginal wheat area next year are increasing. A near crop failure there last year is being succeeded by a complete failure this year. Land thus deprived of two crops' residues is certain to blow persistently unless remedied by an immediate—1951—change from wheat to sorghums. Summer fallowing under present conditions only makes the blowing worse, and cannot assure a wheat crop.

The hazardous areas are parts of the marginal zone shown on the accompanying map.

This zone is not 100 percent marginal but consists of areas where marginal lands predominate.



It has become an orphan. Semiarid dry-land farmers will not claim it because of its bad behavior. Ranchmen of the arid ranges cannot claim it because it is overpriced.

It has been neglected by research agencies, mostly, I think, because it has not been recognized as a separate problem area. It needs more serious studies of land-capability and land-use experience, principally outside of the old Dust Bowl area.

The popular attitude toward most agricultural problems in the plains seems to me to be healthy. It is open-minded on the unanswered questions. Particularly well have farmers accepted the proved wind-erosion control practices. They are alert to seasonal hazards, and those who are farming high-capability lands are in a good position to weather severe drought. There does exist, however, a general lack of understanding about good and poor land.

Too many people think if land is plowable it must surely be suitable for cultivation.

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I was reckless enough last week to appear before a meeting of the American Association of Agricultural Editors. One editor asked me the $64 question: "After meeting all the spectacular problems that have arisen in the plains area, what have you accomplished? You haven't made a good farming country out of it yet, have you?"

Then he added, "Don't answer if you don't want to."

He left me no choice but to answer. The best answer I could offer was this: To the extent that we have met problems halfway we have made progress. One of our most significant accomplishments recently has been to learn how to tell good land from poor land. When the owners and operators of the High Plains marginal areas learn this and begin to abide by it, we will be pretty near to having a good agriculture on the plains.

Practically all of our recurring difficulties trace back to trying to stretch the capabilities of the land too far.

I have followed the agronomic problems of southwestern semiarid dry farming through three decades. The problem uppermost in the minds of farmers changes from time to time.

During the 1920's it was moisture utilization leading to methods of moisture conservation.

During the 1930's the dust problem was uppermost.

During the 1940's it was the discovery that soil fertility had been going down without anyone suspecting it.

I wish to point out examples of how research findings are being applied in conservation operations in the plains area.

(1) One of our more advanced items of progress in 52 soil conservation districts representing the principal type of farming areas in the High Plains is to maintain current reports of soil-moisture and ground-cover conditions, as a basis for soil conservation technicians and county agents to help farmers in cropping plans and soil conservation operations.

These sample areas extend from Reserve district on the Montana-Canadian border to Dickens County in the cotton belt of west Texas. An early study of the best application of soil-moisture information showed that the initial subsoil store was quite important to the winter wheat crop, but that a general county or area report might be misleading to a farmer as applied to a particular field.

To be of real use he must have a moisture test from the field in question, or from a field in certain essential respects treated like his field in the same rainfall area. With the same land type and slope, the same previous crop, and substantially the same rainfall, two or more fields can be expected to accumulate comparable amounts of soil-stored water.

A cross section of a State by county averages is good for the grain trade but does not help the individual farmer.

In fact, the farmer may have contrasting conditions existing on two fields of his own farm. His information must apply specifically to the tract in question.

I quote an excerpt from a moisture summary supplied by one of our fieldmen in Chase County district in southwestern Nebraska in September 1948.

> "Topsoil moisture was completely absent to a depth of 3 inches over the entire county.
>
> "Subsoil moisture varied considerably; the northwest one-fourth of the county having the least, the east one-third of the county the greatest. In the northwest portion continuously cropped fields contained good moisture only between the depths of 3 and 15 inches. In the same area summer-fallow moisture ranged in depth from 24 to 30 inches.
>
> "As a rule the remaining portion of the county had 24 to 36 inches of penetration under stubble fields and 48 inches or more under summer fallow."

A county average in this case would have been very misleading to everybody, as also would any observations short of a thorough coverage of the district.

In comparison, I cite another quotation taken from Central Curry district in eastern New Mexico, also in September 1948. It relates that topsoil and subsoil moisture conditions are quite uniform over the entire district excepting for different methods of preparation.

> "The average moisture penetration for the 34 summer-fallowed fields sampled was 35.6 inches. The 42 wheat-stubble fields sampled showed an average moisture penetration of 17.0 inches."

There was no spotty rainfall there, as in Chase County, and all the farmer needed to know to ap-

(Continued on page 22)

DISTRICT PROFILE

SILVERWOOD of CALIFORNIA

W. E. (Ted) Silverwood, president of the California Association of Soil Conservation Districts, hails from the heart of the Golden State's citrus country. But citrus is only a side line of this Redlands, Calif., rancher; he also produces peaches, barley, and cattle.

Silverwood operates under the banner of "Let's get the job done!" Busy as he is with his diversified 2,400-acre operation, he finds ample time for promoting soil and water conservation. He moves at a pace that nears a trot.

A few years ago one of Silverwood's friends stopped at his house and asked for Ted. One of his now-teen-age daughters came to the door and said her daddy wasn't home.

"Is he out in the orchard?" the friend asked.

"No," the daughter said.

"Is he out in the grainfield?"

"No, he's not there, either," she replied. "All daddy does nowadays is get dressed up and go to soil conservation meetings."

Silverwood became interested in soil and water conservation during the early forties, and he has been one of California's champions of the cause ever since. He has helped form seven soil conservation districts. He was chairman of the committee that sponsored the San Gorgonio Soil Conservation District in 1944 and was president of the district board until he moved from Beaumont to Redlands to be nearer the center of his farming and marketing enterprises.

Silverwood and his friends completed the organization of the Redlands-Highland Soil Conservation District in 1949, and since then he has been a director of that district.

When J. M. (Max) Wilson of Santa Barbara became ill in 1950, he called on Silverwood to serve as western-area vice president of the National Association of Soil Conservation Districts. At the 1951 National Association convention in Oklahoma City, the Redlands rancher was elected western vice president to succeed Wilson.

Silverwood's farm lands are in the Redlands-Highland, Yucaipa, and San Gorgonio Soil Conservation Districts. His main dry-land grain crop

Ted Silverwood.

is barley, and in his 300-acre orchard are mainly peaches, apples, and plums. To keep acquainted with the citrus producers' problems, he has a small grapefruit orchard.

He has a variety of other interests. On some of his high-elevation land he is experimenting with lilac varieties for the Los Angeles cut-flower trade. He is also testing varieties of deciduous fruits that might have added appeal in the market. One of his guiding principles is to get his products on the market either before or after the main run.

Silverwood has been studying the water problem in southern California. He lives in an area where the jumping population makes the water supply a live issue. He has immediate personal reasons, too, for the interest. Water companies that serve him and others in the area don't have sufficient supplies, because of recurrent years of low rainfall, to deliver to each farmer sufficient water to meet minimum irrigation requirements. He realized early that ranchers and growers in his territory needed to develop supplemental water and, in ad-

dition, make more efficient use of their present deliveries.

Silverwood has greatly improved the irrigation systems on his properties in carrying out his soil and water conservation programs. He has also put down wells for supplemental water supplies and in some of his orchards he has installed sprinkler systems to stretch his water supplies to the utmost.

He owns 1,800 of the 2,400 acres he operates. The 600 acres he leases are dry-farm grainland. He was one of the first farmers in the San Gorgonio Soil Conservation District to put in a system of terraces. His first terraces were the subject of much comment since he put them on some of his leased land.

Silverwood's varied interests and community public spirit are illustrated by the groups, other than soil conservation, with which he works. He is vice chairman of the California Fresh Peach Advisory Committee, a director of the Banning-Heights Mutual Water Co., a former director of the Riverside County National Farm Loan Association, and president of the San Gorgonio Fruit Co.

He is a Rotarian, a member of the grange, a member of the Farm Bureau, and an elder in the Presbyterian Church.

Mrs. Silverwood also is engaged in several community services. A former school teacher, she holds undergraduate and graduate degrees from the University of Southern California. Among other things, she is a member of the Redlands school board. She works constantly with her husband on farming and marketing affairs. Their two daughters are Patricia, 17, and Sally, 15.

Mrs. Silverwood, a gracious wife and mother, is tolerant of the time her husband spends on soil conservation activities. Until he became State president and National Association vice president last February, Silverwood's soil conservation activities kept him away from home mainly in the evenings. Now, however, he has to be away for days at a time.

"I sometimes wonder if Ted isn't absent from his business too much," Mrs. Silverwood said recently. "But then I realize he works long hours and works hard. He works at soil conservation the way some people work at golf. It's about his only recreation, and as long as he enjoys it, I'm not going to complain."

Like most Californians who have a Texas-size pride in their State, Silverwood never misses an opportunity to give his homeland a boost. He would like to have the National Association of Districts convention in California in 1955; so he showed up at the Oklahoma City convention of the Association with several boxes of oranges for the delegates. On each orange was stamped "California in 1955." He also had oranges for Oklahoma's Governor Murray, which he presented as a token from Governor Earl Warren of California.

Silverwood is a forceful and persuasive speaker and has a lively sense of humor. Above all, he believes that farmers must measure up to their responsibility to protect and improve the productive capacity of the Nation's land.

—Arthur L. Darsey.

THE W-DITCH

By JOHN G. SUTTON

Cross section of W-ditch, approximately 25 feet wide. Rows will parallel ditch on either side.

THE W-ditch (sometimes called "double ditch") was so named because of its shape. It consists of two broad, parallel, shallow channels, spaced about 20 to 30 feet apart. In constructing the ditch all the excavation, or spoil, from the two channels is placed between the ditches. In this way none of the spoil is left on the outside of the ditches where it would block the entrance of surface water draining from adjacent areas. This unobstructed entrance of surface water from both sides of the ditches along the entire length is one of the main advantages of W-ditches. In constructing a single ditch the spoil must be placed on one or both sides where it may block the entrance of some surface water even when the spoil banks are spread.

Note.—The author is head, drainage section, engineering division, Soil Conservation Service, Washington, D. C.

W-ditch in oats planted 6 weeks previously.

The W-ditch is adapted to field drainage on flat slopes, commonly ranging in grade from about ½ percent to about 2 percent. It is ordinarily used for draining land in row crops, although it is equally useful on grazing land and for other field crops. Where used on cropped land the broad, flat slopes of the center berm permit easy crossing with farm machinery. Spaced at requisite intervals in row-cropped fields, these ditches do not seriously interfere with the use of long rows such as may cross a number of W-ditches.

These ditches can be constructed with either a blade grader or a plow. All the spoil is moved to the center. The berm thus formed between the parallel ditches is usually shaped and smoothed and sometimes serves as a farm road.

Maintenance can be provided by plowing toward the center at the time the field is plowed. During the crop season each cultivation (across a W-ditch) produces small ridges across the channels. Once through with a turning plow is sufficient to remove these obstructions from the channel.

This type of ditch is being used on farms of the Mississippi Delta country, and to some extent in other localities. Such widespread use has resulted principally through the spread of soil conservation work.

W-ditches are not used where large channel capacity is required. For large areas the V-ditch or the trapezoidal channel is used. The W-ditch has proved another useful tool for the engineer's kit.

The advantages of the W-ditch may be summarized as follows:

1. Provides excellent row drainage because there are no berms or spoil banks on the outside of the ditch to obstruct entrance of water from the rows.
2. Does not interfere with farming operations. It is not necessary to limit row length or break up a field into blocks bounded by ditches.
3. Can be constructed with plows available on the farm or with blade graders. Expensive ditching machines are not necessary.
4. Maintenance is accomplished as part of the ordinary plowing operations. Little extra work is required for maintenance.
5. The center berm may provide a raised roadbed through flat, wet areas.

YOUTH AND TREES.—Members of the New Fairfield (Conn.) 4-H Club one day recently planted 1,000 white pine seedlings in a tract of the Andrew Delohery farm that had been recommended by SCS technicians for reforestation because it was unsuitable for pastures or crops. The boys bought the trees as a club project, cut brush to prepare the site for planting, painted steel fence posts, and helped build a fence to keep out cattle. They have taken the responsibility of keeping the tract free of brush and brambles that would crowd or shade the young trees and prevent full growth, and will annually plant more trees.

COLLECTION KEEPS GROWING

EVERY now and then, purely as a matter of covering the news on the conservation front, this magazine tries to catch up with the inflow of honors coming to the Chief of the Soil Conservation Service.

To Cincinnati in April went Hugh Bennett to receive its highest award—the Founders bronze plaque—from the Izaak Walton League of America, which was meeting in its twenty-ninth annual convention. The secretary of the awards committee, William Voigt, Jr., in asking Dr. Bennett to be present, noted that "We had before us for consideration a full score of individuals and organizations, including authors, State and Federal Government agencies, and institutions composed of private citizens. After weighing the accomplishments of all carefully, we felt there was none more worthy of receiving the award this year than you, the acknowledged 'father of soil conservation' in America."

The citation read: "For distinguished service and outstanding achievement in furthering the conservation of soil resources to an extent unparalleled by any individual in recorded history."

To New York in September 1950 went Hugh Bennett to receive from Friends of the Land perhaps the most unique award of all: to be the first recipient of the Hugh H. Bennett gold medal, to be given annually hereafter "For outstanding contributions to the cause of conservation of soil, water and man."

To Eagle River, Wis., in October 1950 went Dr. Bennett to receive from The American Forestry Association a recognition which could not be conferred the year before because of the Chief's absence from the country. The award consisted of life membership in The American Forestry Association, and a walnut plaque bearing the bronze shield of the association and inscribed: "In recognition of outstanding service in the conservation of

American resources of land, water and forests."

More recently, at Jackson's Mill, W. Va., the Chief was made an honorary member of the State Association of Soil Conservation District Supervisors and given a 10-year pin.

"Outstanding achievement in preserving the heritage of farm youth" reads a wooden shield with metal emblem mounted thereon, from the 4-H Clubs of Harford County, Md.

Left to right: Blaney, Mitchell, Edminster, Caton, Chief Bennett, Dell, Garber, Crider.

HONOR AWARDS.—The fifth Honor Awards Ceremony was held in Washington May 15 to accord appropriate recognition to individuals or groups whose work for the Department of Agriculture has been exceptional.

Ten times the garland came to the Soil Conservation Service! Winning Superior Service Awards were Harry F. Blaney, Winfield S. Caton, Franklin J. Crider, Harry H. Dell, Talcott W. Edminster, Norman E. Garber, and Homer C. Mitchell. Unit awards came to the Cimarron (N. Mex.) Work Group, the Hinton (Okla.) Work Group, and the Northern (Utah) Work Group. For the first time, too, an employee of the Service received the much-coveted William A. Jump Memorial Award.

As a memorial to the great William A. Jump, a gold key and certificate are awarded annually to an employee of the Federal Government who is not over 32 years of age, and whose performance demonstrates unusual competence and interest in public administration, endowment for leadership, and close adherence to the basic principles of enlightened public service and consecrated devotion to duty.

Double-winner Talcott W. Edminster was acclaimed (Jump Award) "For outstanding and inspired leadership in public administration, particularly for his original contribution and unique accomplishment in drawing together the efforts of many different groups—farmers, community leaders, college and State officials, and Federal agencies—to effect the unified administration of soil and water conservation research programs in the southeast United States."

And again (Superior Service Award), "For his leadership in unifying the efforts of many different groups toward development and carrying out of a soil and water conservation research program that has solved many soil and water conservation problems in the Southeast."

NATURAL GROUPS SPEED CONSERVATION

By ALFRED M. HEDGE and HOWARD W. REAM

ONE of our tasks is to speed up the application of soil conservation measures. We are constantly searching for better ways to do this. The Service realizes that working individually with each farmer or rancher on all phases of the soil conservation program is an expensive as well as an almost impossible task.

As early as 1935 some attempts were made to work with *groups* of people, principally on a watershed basis, in CCC camp areas and in demonstration projects. During the past 15 years we have worked with about every kind of rural group there is. With the advent of soil conservation districts in 1937, much interest was generated in group action. The soil conservation districts, through the coordinated efforts of the Extension Service and the Soil Conservation Service, carried on effective educational programs through organized (man-made) groups of all kinds, such as farm organizations, community clubs, civic groups, schools, 4-H Clubs, etc. Even today these efforts continue to pay big dividends.

At the same time, the districts began work with small groups on farm conservation planning activities. For the most part these were hand-picked, more or less artificial groups. They were organized or came into existence in a number of different ways. The district supervisors sometimes called together in their localities interested farmers. Or

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Note.—The authors are, respectively, assistant chief of operations, and soil conservationist, Soil Conservation Service, Washington, D. C.

they circulated petitions or had other people pass petitions around to secure the names of farmers who were willing to meet together to discuss soil conservation. In some districts, farmers who requested assistance were asked to go home and get their neighbors together, or were given a group-organization petition to circulate. Some groups were organized on a school-district basis, others by getting owners or operators of contiguous farms together, and still others on a watershed basis. Many groups were organized after the soil conservationist or the county agent selected the people and invited them to attend meetings. In fact, every known method of organizing groups of people was tried.

Considerable success attended this effort, but we also encountered many problems. It was oftentimes difficult to get attendance. So much depended upon the abilities of the person conducting the meeting. He virtually had to be a "spell-binder" to keep attendance up. In fact the work unit conservationist too often had to "ramrod" the endeavor at every turn to make it successful. Even then, many of the groups that functioned effectively in farm conservation planning activities were not so effective in getting conservation measures applied to the land.

Nevertheless, this early work with "organized" or "man-made" groups was very worth while. Field personnel who used effective techniques in working with groups were able to do their job better, easier, and faster than when working with each farmer individually. Training given in group techniques enabled Service personnel to do a better job of dealing with people.

Likewise, these experiences caused Soil Conservation Service technicians to study the groups with whom they worked. Many times they raised the questions:

"Why do some groups function better than others?"

"What motivates people in these groups to become conservationists?"

"How can we do a more effective job in group action?"

These questions aroused considerable interest in the subject, not only in the Soil Conservation Service, but also in the Extension Service and Bureau of Agricultural Economics. Numerous discussions between these agencies in Washington and in regional offices were held. In 1945 the Service employed Dr. John P. Shea to study this problem and to train Service people in the principles of working with groups of farmers and ranchers in soil conservation.

Shea worked with Service personnel and collaborated with such men as Carl C. Taylor and the late Nat Frame of BAE; Douglas Ensminger and E. J. Neiderfrank, Extension Service; Charles P. Loomis and Paul Miller, Michigan State College; Carle P. Zimmerman, Howard University; and C. V. Lively, University of Missouri. Shea advanced the idea of locating and working through *natural* groups.

Natural groups are made up of people who habitually associate with one another because of needs, attitudes, customs, modes of life, and beliefs. The family, the neighbor group, the neighborhood, and the community are all natural groups.

These groups come into being by natural processes, develop slowly, and endure because they serve continuing needs of the members. This is in contrast to *artificial* or *man-made* groups which are formally organized for special purposes, such as farm organizations, civic clubs, garden clubs, school districts, organized extension or soil conservation groups, and the like.

The natural group approach involves knowing and working with community and other over-all leaders whose opinions are respected. Such leaders can aid in education and information programs and in various ways stimulate farmers and ranchers as well as the general public to become conscious of and to recognize soil conservation problems. Equally as important, and more basic, to the development of conservation farmers and ranchers is the identification of neighbor groups and their leaders. Many farmers and ranchers believe that the best way for them to improve their understanding of conservation and speed up the establishment of conservation programs on their farms is through their neighbor groups.

The term "neighbor group" as used by the Soil Conservation Service should not be confused with "neighborhood." Rather a "neighbor group" is very similar to groups described by various authors as "informal," "friendship," "mutual aid," or "congeniality" groups. The neighbor group is a group of families bound together by mutual likes, interests, and needs. The most enduring and effective type of cooperation among farm people occurs in these groups of farm families who visit, borrow, exchange work, discuss their problems and ideas,

and engage in numerous other activities. Within such groups there are always one or two "good neighbors" who are looked upon as being the most willing to help the others in the group. These "good neighbors" are the group leaders who are most often looked to for advice, and who, if they try something new, are most likely to be emulated.

Because of these characteristics, neighbor groups afford the most logical and natural way in which to work with people in soil conservation. For the most part their meetings are informal. One can frequently observe such informal gatherings on street corners, at auctions, at the crossroads store, or preceding or following large meetings of "artificial groups." In such huddles or at more formal neighbor-group get-togethers, people discuss things more freely and participate more actively in projects of mutual interest than at larger meetings where they don't know most of those in attendance. Here ideas are stripped of fancy trapping, discussed, analyzed, and revised. Here is where soil conservation becomes a part of the group's way of thinking.

From 1945 to 1947 these principles were discussed with Service people at regional, State, and work group meetings. However, not until a definite practical technique for locating natural groups and leaders was worked out, and training given through actual interviews with farmers by persons experienced in these techniques, did the idea begin to be accepted. Only by consulting with the members themselves can one positively determine the membership and accurately identify the leader of a natural group. Briefly, the steps followed by Service personnel are these:

1. Consult with several over-all district, or county-wide, leaders to obtain the names of the more important community leaders.
2. Talk to these community leaders and gather all information possible about neighbor groups and their leaders.
3. Using the names secured in this manner, talk to enough people in each neighbor group to verify the membership of the group and determine as positively as possible who the leader or leaders are.
4. Consult with the leader and check with him as to the membership of the group. Let him decide where borderline cases fit. Likewise, find out from him whom he considers to be the real community leaders.
5. With the leader, determine the group's interest and understanding of soil conservation. Plan with him the course of action to be taken to help the group to move along in soil conservation work.
6. Ask community and over-all leaders to encourage and assist the neighbor-group leaders.

Training Service personnel, on site, in these methods began early in 1947. Up to this time, with but few exceptions, all work unit conservationists and district conservationists have been taught these principles and techniques by on-the-job training methods. Likewise, most of the aids and soil scientists and many of the other technicians at the work unit, work group, State, and regional levels have been trained.

Considerable progress has been made in locating and working with neighbor groups in soil conservation districts throughout the country. Up to December 31, 1950, the Soil Conservation Service had located approximately 33,000 neighbor groups, consisting of more than 284,000 farm families. Of the groups located so far, one or more activities in connection with planning, application, or maintenance of soil conservation work have been carried on by nearly 24,000 groups.

While accomplishments have been very satisfactory, much remains to be done to get wide-spread understanding and adoption of the neighbor-group approach.

NEIGHBORS MEET A PROBLEM.—Last year cotton failure on 50,000 acres of sandy land in the Farm Security (Okla.) Soil Conservation District left large areas exposed to blowing. The worst of it was that farmers in the area, for various reasons, had repeatedly experienced cover-crop failures.

A chief bottleneck was the lack of grain-fertilizer drills. The drills, hard to find, were obtained with the help of the district board and local banks, which provided financing at a low rate of interest. A whirlwind hunt turned up 10 drills, all of which were purchased by neighbor groups. Also made available were adequate supplies of fertilizer, rye seed, and hairy vetch seed.

When the project was wrapped up, its results could be simply stated: The largest acreage of cover crops ever seeded in the district—more than 3,500 acres put in vetch, rye, and alfalfa—reduced erosion, enriched soil.

Neighbors, working together under the supervisors' leadership, got the job done.

—Ralph H. Gieck.

CONSERVATION IN NORTH CAROLINA:

By BARRINGTON KING

ELEVEN farm families, neighbors constituting a "natural group" in the Central School section of Iredell County, near Statesville, N. C., have teamed together under a single conservation plan, at great advantage in time and cost and all-around efficiency. Teamwork is not new to these families. They worked together to get electric lights and power, telephones, a milk route, and a hard-surfaced road. They joined in support of churches, schools, and recreation for their children. Cooperation became a habit—a most profitable habit.

They found that in many undertakings the sum of accomplishments of the group far exceeded what could be done by the same people working as individuals.

Soil conservation, logically enough, became a group undertaking. The result is a single land-capability map, a single land-use map, and a single plan of conservation operations for all of the 1,165 acres in the 11 farms.

Every member of the group has a copy of the plan and each knows what it calls for in detail. He knows his own land, as well as his neighbors' land. He knows his own problems and also those of each of his neighbors. He knows what each must do—when, where, and how. It's a unified —group—program, 100 percent.

But let Roy Weber tell you the story in his own words, as he told it to a group of SCS workers from North and South Carolina recently at a meeting in Winston-Salem, N. C.

"I know my neighbors.

"Why do I know them?

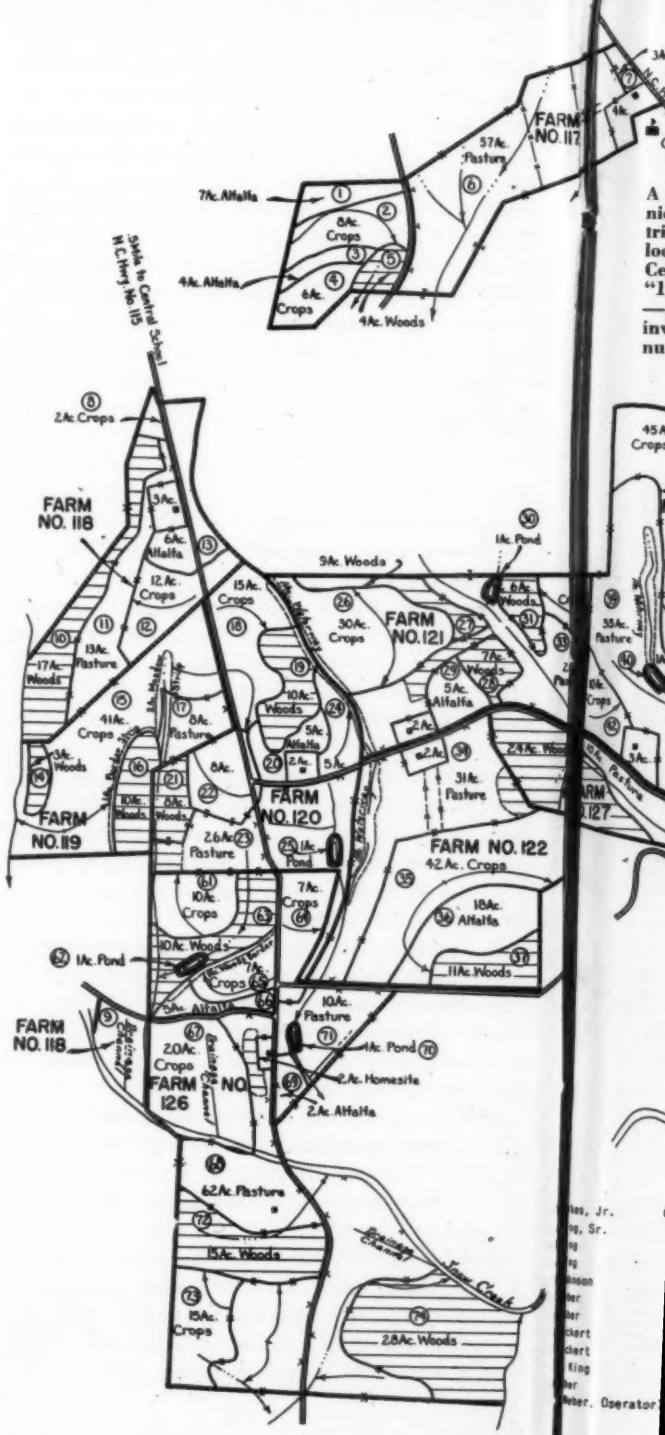
"I work with them. I see them. I talk with them.

"What do we stand for in our group?

"Good churches, good schools, good living, good sports for our young folks.

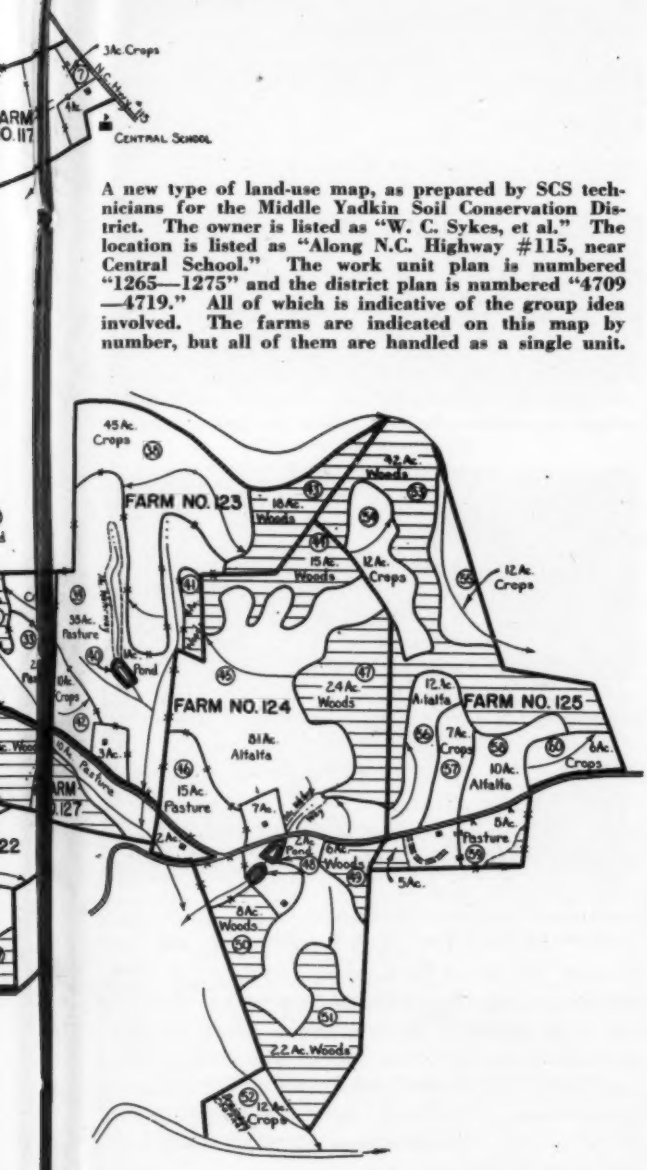
"Why are we interested in soil conservation?

"Because without it—without keeping our soils productive, without keeping our land from washing away—we cannot have these things.



Note.—The author is chief, regional division of information, Soil Conservation Service, Spartanburg, S. C.

INA: ONE FOR ALL, AND ALL FOR ONE



A new type of land-use map, as prepared by SCS technicians for the Middle Yadkin Soil Conservation District. The owner is listed as "W. C. Sykes, et al." The location is listed as "Along N.C. Highway #115, near Central School." The work unit plan is numbered "1265—1275" and the district plan is numbered "4709—4719." All of which is indicative of the group idea involved. The farms are indicated on this map by number, but all of them are handled as a single unit.

kes, Jr.	Central	- 117
ng, Sr.	"	- 118
ng	"	- 119
ng	"	- 120
nson	"	- 121
ner	"	- 122
ner	"	- 123
ckert	"	- 124
ckert	"	- 125
king	"	- 126
ner	"	- 127

Weber, Operator)

"J. A. Stewart, the aid with the soil conservation district, came out and asked me about my neighbors—who they were. He said the district could help us best if a group of neighbors could get together.

"I thought it was a good idea to work together with my neighbors on soil conservation, as we had done before on other things. So I told him about the folks I see and work with and talk with.

"Then the planner, Carl Julian, came out and talked to us about the kinds of land. He showed us a colored map of all our farms showing all of the different land conditions.

"You know, back a few years ago there wasn't a house in the group that was painted. Why? Because nobody was making enough money to paint them. Now, new barns and houses have gone up and they are all painted.

"As a group we went out and asked for electric power. We wouldn't have gotten it if we had individually asked for it.

"We also got a telephone line the same way.

"We needed a road surfaced. It is now being surfaced.

"Working together as a group, we have gotten a lot done. This is nothing to what we will get done with these two men (Julian and Q. W. Patterson, farm planners in the Middle Yadkin Soil Conservation District) in back of us.

"When you get a group together in a large meeting folks will sit and listen, but not say anything. They go home and talk it over with their neighbors, though.

"But you get a group of neighbors together out on a farm in their group and they will really talk.

"We're a group working together. What one knows we all know, because we have a plan of each other's farm.

"We own our own machinery the same as the big farmers, but none of us individually has a complete set. Three members have pick-up hay balers. They do work for others in the group. Others have small tractors and other types of machinery. So, together, we have all the equipment we need.

"When a rain comes up suddenly when we're haying, we all pitch in and get the neighbor's field of hay in. Usually the hay is in the barn without getting wet and we all say, 'That was sure a nice rain, wasn't it? Let's go fishing tomorrow.'

"After these maps were prepared, before Julian got them distributed, those telephones began ringing around the neighbor group.

" 'Has Julian been around with the map?'

"A newspaper article appeared in the paper. The telephones rang again.

" 'Did you see the article? I see so-and-so's name—by gosh, *all* our names are in there!'

"We are happy. We are working together. We appreciate the fact that someone was interested in us and recognized us in the newspaper.

"There are 11 families of us on 1,165 acres.

"We have 139 milk cows on these farms. We have all the milk we can drink and all the butter we can eat, and we produce plenty of additional milk to furnish our city friends.

"We have 1,500 laying hens.

"We have over 50 head of beef cattle and have all the meat we need with some left over to sell.

"There are 51 people in all. The women and girls don't work in the fields. They are real homemakers. Some of the girls are in college. The boys are not going to town for jobs. They are happy on the farm.

"Are we interested in just the neighbor group?

"No, we are interested in the community, in North Carolina, and in the Nation. We like to see other folks happy too. The unhappy ones are those who are grumbling all the time, or whose buildings are falling down because their soil is going down hill."

Weber was asked where the group got the "spark."

"If you go into any neighbor group there is always someone who has a 'spark'," he replied.

"All you need to do is find it and set it off. Usually a blaze will result.

"We have a group that loves to fish. There are five ponds in the group and we fish with the neighbors. They like to have us come and fish with them in their ponds.

"We like the Soil Conservation Service men. When they come out to see us they are dressed in work clothes. They are ready to work and help us with our problems. They don't come out to 'tell' us what to do. They come out to see what we are doing or going to do. And, believe me, while they are finding out what they want to know, we waste no time in finding out what they know."

Members of the group include Roy Weber, J. C. Weber, T. M. Rickert, J. H. Rickert, A. E. Johnson,

One of the five ponds on group's farms. Beef cattle in background belong to Frank and Richard King.

A baseball game in progress on ground of Central High School, a modern school of which the group is very proud.

Harvesting mixture of alfalfa and oats which will be dehydrated for dairy feed, on farm of J. H. Rickert and Sons.

John S. King, H. H. King, Frank King, Richard King, James H. King, and W. C. Sykes, Jr., and their families. Altogether, including the children, there are—as Weber noted—51 members altogether. Oldest member is Mrs. Henry S. King, about 80, mother of Frank and Richard.

The children, Roy Weber points out, are extremely important, since they represent a new generation growing up in the community. Two of the girls, Betty King, daughter of Mr. and Mrs. Richard King, and Ellen Rickert, daughter of Mr. and Mrs. J. H. Rickert, are attending North Carolina Woman's College at Greensboro. Betty plans to be a home demonstration agent and Ellen is majoring in library science.

The group is proud of Central High School. Frank King is chairman of the county board of education, and J. H. King is on the Central High School board. There are two active churches—Snow Creek Methodist and Clio Presbyterian.

Maybe it's because of the younger generation that the group attaches so much importance to rec-

Registered Jerseys in Roy Weber's pasture of Ladino clover and orchardgrass.

This milk truck picks up around 250 gallons of top-quality milk each day from farms in Weber group, for retail sale in Charlotte, N. C. Here's a pick-up at Roy Weber's farm.

reation, but the older ones like their fun too. Most of the Kings are baseball and football fans; the Rickerts, J. C. Weber, and A. E. Johnson are fishermen, and Roy Weber and the Sykes are primarily interested in Jersey cattle and saddle horses. But all of them like to fish and hunt.

T. M. Rickert is 73, the oldest man. Several years ago he and J. H. Hiatt, who was then the presiding elder of the Methodist Church went squirrel hunting. Just as Hiatt got a bead on a squirrel and pulled the trigger, Rickert stepped in a yellow jackets' nest.

"Oh, Brother Hiatt," Rickert yelled, "you've shot me."

Carl Julian, farm planner, and W. C. Sykes in field of barley on latter's farm.

J. H. and T. M. Rickert in latter's alfalfa field. Yields average 3½ to 4 tons per acre. Dehydrated alfalfa meal sells for $65 per ton for use in chicken feed.

Some of the group at informal gathering on A. E. Johnson lawn. Seated: W. C. Sykes, Jr., Roy Weber, Carol Weber, W. C. Sykes, III. Jimmy King, Cooper Sykes, T. M. Rickert, A. E. Johnson, J. H. Rickert, Bill Johnson, Richard King, Jim King, J. C. Weber, Frank King, and Robert Weber. Standing: Mrs. Roy Weber, Mrs. W. C. Sykes, Jr., Mrs. T. M. Rickert, Mrs. J. C. Weber, Mrs. A. E. Johnson, Mrs. Richard King, and Mrs. J. H. Rickert.

Hiatt couldn't figure how that could be, as he had shot at a squirrel high on a limb of a tall oak. But the blast of the gun and Rickert's yell coming at the same moment was almost convincing. So Hiatt "broke" his gun and ran over to see how the victim was.

Just as he got there, Weber relates, three or four of the yellow jackets popped him, and cleared up the mystery.

Maybe there's a parallel in this story to what has spurred the neighbor group into action in their joint conservation program. Roy Weber got bitten by the conservation bee and his close friends came to see what was going on. And when the mystery had been cleared up, things began to happen in soil and water conservation.

Getting conservation on the land in Iredell County hasn't always been that simple. Carl Julian, who started as a farm planner in Iredell 10 years ago, recalls that during his first year he used to write farm plans and couldn't get farmers to sign them.

They would say, "I've been talking this over with John Smith, and he doesn't think it's the thing to do."

Or maybe it would be, "I don't believe I'll put this meadow strip in. John Smith has a good farm and he doesn't have any meadow strips."

This had been going on for some time when Julian decided he had better find out who this John Smith was.

When he found him and talked over the conservation program, John Smith decided he wanted a conservation plan on his farm. He said he never had understood about conservation work before, because it hadn't ever been explained sufficiently to him.

After that, Julian found that it was a lot easier to get together on conservation plans with John Smith's neighbors. And he began to find out, too, that there was a "John Smith" in *every* group, and that once he was located and interested in a sound soil and water conservation program, the job of planning and application in his group became much simpler.

Julian was still learning these things the hard way when A. H. Chapman and George Dickinson from the Soil Conservation Service office at Spartanburg, S. C., went to Statesville to test out a method of locating natural groups and leaders.

"They cleared up my thinking on how to locate natural group leaders, and verified the things I was finding out by trial and error," Julian recalls.

The survey that was started at that time to identify such groups and leaders was completed last summer. It showed 270 neighbor groups, averaging about 10 members each. Since the first of the year, a joint plan of operations has been developed for five of these groups and Julian and his associates are working with 30 other groups which are in various stages of planning and application of group conservation programs.

The Duke Power Company owns 15,000 acres of land, most of which is leased to tenants and is operated for watershed protection in accordance with sound soil and water conservation measures. Julian is working in this area, too, through Fred Brotherton, land agent for the company. As old tenants leave, a district plan is worked out for each new tenant.

On all other land in the county, contacts are made through the natural group leaders, and conservation plans are developed on a neighbor group basis.

"All people are on somebody's team," Julian comments. "The trick is to get the team playing the conservation game. Once you get them interested in conservation of their soil and water resources, it gives them a neighbor group bond that makes them a stronger team than ever before."

The Weber neighbor group is convincing proof of what Julian says. They are playing the conservation game with the energy and enthusiasm of a team that's out to roll up a winning score. With Roy Weber in there calling signals, this 11-man team will bear watching for a good many seasons to come.

CONSERVING WATER AND CASH. — Kelly Brothers, dairy farmers near Perry, N. Y., have discarded their 300-gallon water tank. Annually they had hauled water—two or three loads a day for as long as 6-month periods—for their herd and other uses on the 580-acre farm. The water cost them 50 cents per load plus their time and the use of a truck in hauling it 3 miles each way. They built a ½-acre farm pond that cost them $350—less than 1 year's cost of buying and hauling stock water. The pond, designed by SCS technicians working with the Wyoming County Soil Conservation District, holds 600,000 gallons. It provides fire protection and fishing, since it is stocked with bass and bluegills.

"A Service of Extreme Value"

Department of State
Washington
May 23, 1951

My dear Dr. Bennett,

Because I have had such a fine experience with your Service specialists in connection with my farm near Millbrook, Dutchess County, N. Y., I feel impelled to write you a letter commending your work. I have found the services and facilities available through the Dutchess County Soil Conservation District to be of inestimable value, particularly the technical assistance made available by the Soil Conservation Service. I wish to thank you for the assistance given me by Mr. Harrison Cassell, Jr., your soil conservationist. His technical know-how, his loyalty to the Department of Agriculture, his encouragement, and his advice to me have been of priceless value, and I wish it were possible that all farm owners could benefit by his constructive criticism.

On my 466-acre farm we are following a 5-year crop-rotation plan with the cropland being farmed in contour strips. Later some diversions will be installed. Several pastures remain to be reseeded. At present we have a 4½-acre pond under construction which is to be stocked with trout. The farm now carries 80 registered Holsteins of which 50 make up the milking herd. We plan to increase this number somewhat as our farm land is improved. The Department's pamphlets on various phases of conservation, as well as those on livestock, etc., have been extremely valuable.

As the "father" of soil conservation you have much to be proud of in the organization which you head. The high type of personnel and the technical job which they are doing in combination with the facilities of the local soil conservation district, provides a service to farmers that is of extreme value to them and to agriculture.

I believe in flowers to the living, and desire to hereby pass along my highest praise for Secretary Brannan's and your efforts along these lines.

Sincerely yours,
(Signed) RICHARD C. PATTERSON, JR.
United States Minister
to Switzerland.

Dr. Hugh Bennett, Chief,
Soil Conservation Service,
Department of Agriculture,
Washington 25, D. C.

KATIE GETS THINGS DONE

By ROSS H. MELLINGER

Kathleen E. Stephenson

AFFECTIONATELY known to her friends as "Katie," Kathleen E. Stephenson is synonomous with agriculture in Wetzel County, W. Va. She expends boundless energy on behalf of rural interests in rugged Wetzel County.

In 1947 she originated the idea of holding the Wetzel County Conservation Week, now in its fifth year. It was the first organized program of its kind in the State and set a pattern now followed by most other West Virginia counties. As a result, soil and water conservation and good land use have become the business of practically everybody in the community.

Katie went to work for the West Virginia Extension Service as a 4-H Club agent in Mason County

Note.—The author is the Soil Conservation Service representative stationed at Elizabeth, Wirt County, W. Va.

DETROIT PUBLIC LIBRARY

in 1928. She came from a local farm and easily got acquainted with the farm youngsters and their parents. It was in 4-H activities that Katie learned that any farm program, to succeed, must start with soil.

"I began to realize from visits to farm families that we were missing a lot by not going back to the land to begin the needed broad-scale improvement in farm life," she explains. "Many of the 4-H children did not have much to work with simply because the farm family lacked good soil resources."

Katie has always made the most of her opportunities to understand agriculture's complexities. In the fall of 1931 she became home-demonstration agent—the only extension worker in the county. Besides performing as "home dem" agent, Katie organized 4-H Clubs, took care of Triple A's corn-hog program, organized women's groups in WPA activities, and attended to the myriad things that ordinarily gravitate to a county agent.

Five minutes spent in Katie's office is an eye-opener. She will place a telephone call, sort mail, jot down notes, straighten up her desk, talk with office callers—all at the same time. And at the end of day she may suddenly observe with seeming surprise: "Gosh! I believe I'm about to lose my feeble mind."

During the war Katie, of course, was in the thick of things, helping organize bond drives, promoting the food-conservation program, writing to numerous 4-H friends in the armed services.

After the war, when USDA councils were organized, Katie became an enthusiastic member. Soon she discerned a need for closer coordination of all agency representatives to carry out an effective agricultural program. Recalling her 4-H experiences and the need for starting with the soil, Katie thought that the council would be a good vehicle for emphasizing the importance of soil conservation, because soil conservation is everybody's business—not merely that of agricultural specialists and farmers. With characteristic foresight, she proposed early in 1947 that the council sponsor a Conservation Week in the fall.

This first fully organized Conservation Week in West Virginia was one of the first in the Nation. Virtually everyone had a chance to participate. Schools, churches, youth groups, business organizations, townspeople, farmers, agricultural workers—they all had a place in the program.

So successful was the first Conservation Week that Katie got the council to make it an annual Wetzel County affair. It is bigger and better every year. In 1948 a minor face-lifting job was featured. In 1949 forestry was the theme. And in 1950 grassland farming took the stage.

Conservation needs of Wetzel County are the basis of all activities. Most important among these needs are the wise use and management of grasslands and forests. To help bring these needs to the attention of more citizens, Katie came up with an idea for a Wetzel County seal to be featured by cooperating agencies and other people. It carries the slogan "Long May Our Land Be Green—Grow More Grass and Trees," which is widely used.

The 1951 program centers on trees and grass. A calendar has been developed to cover activities every month through the year and give everybody an opportunity to participate. Events include a woodland-management campaign, forestry and grassland demonstrations, a radio program, farm tours, and 4-H demonstrations.

Of particular interest is the way State-wide programs are integrated. Such events as the West Virginia "Greener Hills" campaign, Arbor Day, and the Tree Farm, 4-H conservation, and other programs take their proper places and add emphasis to local activities.

Katie's work for conservation is not bounded, however, by season or calendar dates. She is constantly on the lookout for ways to work conservation into other things she does. Her farm women's clubs carry out a cover-crop campaign during which they put the pressure on husbands to get a cover crop seeded on the garden and the rest of the land, too. The 4-H Clubs are always endeavoring to promote conservation. During 4-H camp, special activities are developed around the conservation theme. One of Katie's 4-H conservation forums puts to shame many adult forums on the subject.

You might think that after all this, there wouldn't be much else required. But remember, Katie thinks that conservation is *everybody's* business, so she concentrates on newspapers, radio, and other media to let everyone know what's going on. After she gets through organizing a campaign, anybody who has ears or eyes within 200 miles of New Martinsville knows what's going on in Wetzel County.

She is personally acquainted with every news-

paper editor, photographer, radio farm-program director, and agricultural worker for miles around. If there is any way at all to search out a publicity angle, Katie finds it. Much of the stuff she writes herself; the rest she gets by asking, begging, flattering, scaring, or coercing. You really haven't arrived in Katie's inner circle until, in one of her impatient moods, she has called you a "hammer head!"

All this might lead to the conclusion that Katie spends all her time on conservation activities, but her "regular" duties are accomplished as well. She has 9 farm-women and homemakers clubs with 233 members, and 29 4-H Clubs with 500 members that she and County Agent Kittle helped organize and keep functioning.

There is no doubt that Katie is the prime mover in Wetzel County's conservation-education activities. She has lots of help from others, but most of the ideas, planning, and action stem from Katie and her ability to get things done. That, coupled with her sincerity, enthusiasm, and desire to be helpful to farm people, is why Katie is recognized as a real agricultural leader.

SOIL WAS DEAR TO HIS HEART

By OTTO F. BAUMANN

THE Theodore E. Ruess Memorial Plaque was recently awarded to the Millstadt Consolidated School of the Shiloh-O'Fallon (Ill.) Soil Conservation District, and presented by State Grange Master Dorsey Kirk.

The thought expressed by many of those present was: "How happy Ted Ruess would be if he could know that a movement he cherished will be carried on in his name through the children of his own community, many of whom will soon be real soil conservationists on their own farms."

The late Theodore Ruess was a pioneer in soil conservation in his community. Even before a district was organized, he had a good soil conservation program on his farm near Belleville. His were the first terraces in the county. He was the first chairman of the Shiloh-O'Fallon Soil Conservation District, which was organized primarily under his leadership. This was the first district in Illinois. Ruess worked and studied constantly to improve his already good methods of caring for his soil.

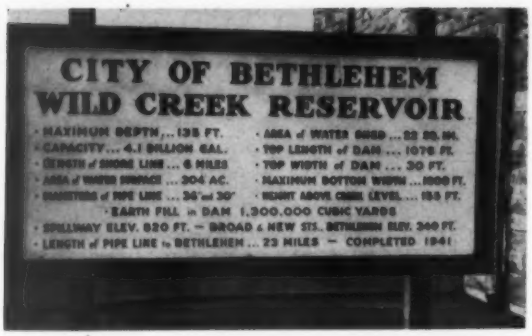
Note.—The author is soil conservationist, Soil Conservation Service, Belleville, Ill.

The late Theodore Ruess explaining his farm conservation plan to visiting teachers and Rotarians in 1946.

Left to right: Hugo Haertling, chairman, Shiloh-O'Fallon Soil Conservation District; Dorsey Kirk, master, Illinois Grange; Gilbert Fischer, district director; Mrs. Frieda Pulliam, teacher, Millstadt School; Elmer Dickhaut and Gene North, district directors.

In memory of his love of the land and his concern for its care, the Ruess family, after his death, May 28, 1950, made a contribution to the district to create a soil conservation memorial to him. Proceeds from the contribution will be used to purchase yearly subscriptions to SOIL CONSERVATION Magazine for student winners of an annual soil conservation poster contest.

State-wide recognition also came with the establishment of the Ruess Memorial Award. This award was financed by the Illinois State Grange in cooperation with the directors of the home district and the county superintendent of schools. The winner of the award is selected each year by the district governing body and is based on a score sheet given to each school entering the contest. Soil conservation scrapbooks and posters, essays, field trips, and other activities are considered in the rating. The plaque is a traveling award and will be kept by the winning school for 1 year.


CITY OF BETHLEHEM
WILD CREEK RESERVOIR
· MAXIMUM DEPTH ... 135 FT.
· CAPACITY ... 4.1 BILLION GAL.
· LENGTH of SHORE LINE ... 6 MILES
· AREA of WATER SURFACE ... 204 AC.
· DIAMETERS of PIPE LINE ... 36" and 30"
· AREA of WATER SHED ... 22 SQ. MI.
· TOP LENGTH of DAM ... 1078 FT.
· TOP WIDTH of DAM ... 30 FT.
· MAXIMUM BOTTOM WIDTH ... 1000 FT.
· HEIGHT ABOVE CREEK LEVEL ... 185 FT.
· EARTH FILL in DAM 1,300,000 CUBIC YARDS
· SPILLWAY ELEV. 820 FT. — BROAD & NEW STS., BETHLEHEM ELEV. 360 FT.
· LENGTH of PIPE LINE to BETHLEHEM ... 23 MILES — COMPLETED 1941

THE CITY WITH A FARM PLAN

By H. R. FRANTZ

THE city of Bethlehem, Pa., is the first city or town in the Delaware River Basin to have a complete farm plan, but it is not unusual for Bethlehem to be first. The first waterworks in Pennsylvania was started in Bethlehem in 1755, and recently the city has become nationally known as the first Christmas City.

In 1939 the city bought a large tract of land in the Pocono Mountains embracing Wild Creek watershed and built a water-supply reservoir, from which a 23-mile pipe line extends to the thirsty city.

By 1950 the city-owned 9,600-acre watershed surrounding the reservoir was beginning to demand attention. Forest fires, brush intrusion, and soil erosion were taking their toll of the forest cover and exposed fields, threatening eventual reservoir contamination. A preliminary survey by the city water department showed the immediate need for forestry assistance and advice on soil conservation practices.

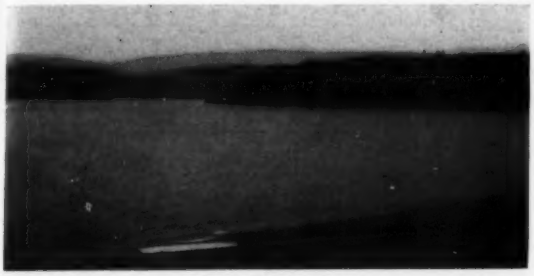
At a meeting with Mayor Schaffer and City Council, the conservationist for the Interstate Commission on the Delaware River Basin (INCODEL) suggested that the city take advantage of the services offered by the Carbon County Soil Conservation District, in which the watershed is located. It was explained that the district had a memorandum of understanding or operating agreements with the Pennsylvania Department of Forests and Waters, Pennsylvania Game Commission, Pennsylvania Highway Department, and the United States Soil Conservation Service, and that they, through the district, would be glad to cooperate with the city.

The city signed an application for assistance, which was accepted by the Carbon County Soil Conservation District directors. A soils man from the Soil Conservation Service, after establishing the property lines on an aerial photograph, surveyed and mapped the soils, slopes, land use, and erosion in the watershed. The Department of Forests and Waters, in cooperation with the INCODEL conservationist, made a detailed fire plan and divided the watershed into various areas for management purposes.

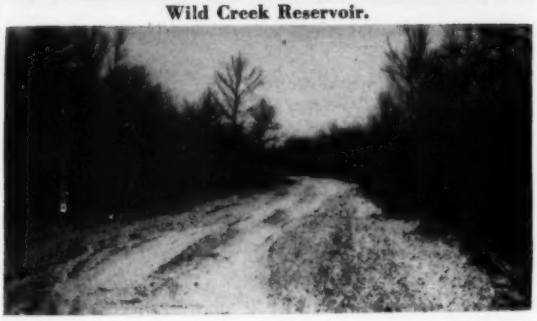
An SCS farm planner, using the conservation survey map, made a complete conservation plan for the area and shrub- and tree-planting recommendations for the idle fields and cleared areas. Where streams and drainage ditches were eroding, especially in front of the dam, gully-control structures and stream-bank-control measures were recommended.

Gully from drainage ditches in front of dam.

Note.—The author is conservationist for the Interstate Commission on the Delaware River Basin, Philadelphia, Pa.



Wild Creek Reservoir.



Newly constructed fire lane along game-propagation area.

The City Council, appreciating the coordinated field work done and the constructive recommendations contained in the farm plan, went along 100 percent. They purchased a bulldozer to build the required fire lanes and access roads and construct the conservation structures in the streams and drainage ditches. As soon as the bulldozer arrived, the city engineer, the superintendent of the water department, and the farm planner were on the job constructing rock check dams and applying riprap in the gullied portions of the water courses. The gully banks were then sloped and planted to Wichura and Rugosa rose and other vegetation.

The complete fire plan was carried out. Along with fire-lane and access-road construction, the plan called for the building of a small fire tower, the purchase of fire-fighting equipment, and the organization of a fire-fighting crew.

Fifty thousand trees were planted this spring. This brings the total number of trees planted on the watershed to date to over a million. Plans were made to commence improvement cuttings and thinnings next winter in the compartments and plantations designated by the foresters.

The Pennsylvania Game Commission fenced in a 200-acre plot as a game refuge to be used for game propagation. The watershed contains some of the best hunting grounds in the Delaware River Basin and it might be said that this is the one farm plan in the country on which four black bears were shot in one season. Except for the area immediately surrounding the reservoir and the game propagation plot, the watershed is open to sportsmen.

Although this farm plan was not designed to produce agriculture crops, it will produce a crop that means more healthful living and stabilized industry to the 76,000 inhabitants of Bethlehem. That crop is sparkling, clear cool water. A by-product will be forest products from the managed timberlands and plantations, and hunting and recreation which can't be measured in dollars and cents.

TREES PIN DOWN INVESTMENT.—Boyd Fortney is reestablishing the 103-acre York County, Pa., farm where he was born in 1909. It is all going into trees. The 25 acres not already in woods will be afforested.

Fortney is in the York County Soil Conservation District. His conservation plan was made with the help of Melvin Blish, SCS conservationist, with cooperation also from the Pennsylvania Department of Forests and Waters, the State Game Commission, and the Gladfelter Pulp Co.

He started his project this spring by planting 13,500 tree seedlings, planting largely by machine. He took the first profit by cutting 1,000 locust posts for sale to the Pennsylvania Highway Department. Mr. and Mrs. Fortney believe that the farm will prove a solid investment to turn over to their sons, now 9 and 5 years old.

LICKING FLOOD WATERS.—By establishing an open drainage system that successfully handles floodwater, and developing a grass tolerant to frequent flooding, Walter Huber, of the Dutchess County (N. Y.) Soil Conservation District is able to use a 37-acre tract along Webatuck Creek, near Armenia.

This bottom land had always been kept in native grasses that provided little good pasture because it was subject to frequent floodings. There were many pockets and irregularities, in which water stood for long intervals.

A long, broad-based ditch was designed and constructed under supervision of SCS technicians, which picks up the runoff from the adjacent hill and carries the floodwater from the pockets into the river at the end of the pasture. Half the field was seeded to reed canarygrass and Ladino clover in 1949, and the remainder in 1950. The 1949 seeding provided excellent pasture in 1950 and the whole field now is in good production for grass, silage, and pasture. There has been no damage from the five floodings of the past year.

SOUTHERN HIGH PLAINS

(Continued from page 4)

ply the information of his own fields was the type of preparation.

(2) Methods of wind-erosion control have been brought to a high state of proficiency in the past 15 years. The best combinations of methods fitted to the needs of different soils are well developed.

Our knowledge of land capabilities in the old Dust Bowl area is being applied to conservation planning in soil conservation districts. Safe land use is an indispensable first step to wind-erosion control. The best practices known will not keep low-capability land from blowing away under cultivation during the long dry spells which are natural to that climate.

An awful lot of dust control remains yet to be started in the arid margins of the Great Plains. The newness has barely been worn off 3 million acres of low-capability marginal zone land.

(3) In terms of land-productivity decline, more can be charged to erosion than to removals of plant food in the grain marketed from the first 30 years of cultivation on the High Plains. Fifty-bushel wheatland cultivated 30 years without effective wind-erosion control now has a 43-bushel ceiling. That was just found out in the last 2 years. It wasn't noticed by farmers because the loss of soil productivity was being more than offset during these 30 years by the efforts of the plant breeder and the advent of more efficient farming equipment.

What have we done to meet the High Plains fertility problem? Well, you might say we have just now found out about it, but we are getting squared away on some experiments. Give us a little time, if possible, before handing us over our next big problem, and I am confident we will come up with some sort of answer.

Before somebody asks me if we are going to have another Dust Bowl, I want to say, "Not in the same place."

REVIEWS

UNCLE SAM'S ACRES. By Marion Clawson. 414 pp. Illustrated. 1951. New York: Dodd, Mead & Co. $5.

The specialist in land management or others long familiar with public-land administration will find little in this book that is new. Nevertheless, this is a book that needed writing and the author has done a public service in drawing together much of the information necessary to an understanding of the development and administration of public-land policies in the United States.

The first three chapters discuss Uncle Sam as a landlord and trace the historical development of both the acquisition and disposal of public lands—from colonial days to the current controversy between the States and the Federal Government over the "tide lands." The next chapter describes the establishment of the great systems of reservations of public lands: reservations for Indians, the national parks, national forests, grazing districts, wildlife refuges, and others. This is followed by an account of the various land-purchase programs, including the purchase of submarginal farm land, the acquisition of additional forest areas by purchase, the buying of land for national defense, and other uses.

Chapter 6, on "What Our Federal Estate is Like," will perhaps be disappointing to many readers. The location of the public lands is indicated in some detail, with the familiar percentages of such lands in each of the Western States. Apparently, however, the very diversity of their physical conditions precluded more than vague generalizations about the climate, vegetation, or topography, certainly not enough to give much of an idea of what these lands are like in these respects. No mention is made of the *condition* of either forest or grazing lands, and their productivity is dismissed with statements of the cubic feet of timber or pounds of harvestable forage produced on the "average acre."

The discussion of the development of water resources is excellent, starting with our historical recognition of the importance of water for transportation, power, irrigation, the generation of electricity, flood control, and finally, the more recent efforts toward watershed or drainage-basin management. The struggles between such agencies as the Tennessee Valley Authority, the Bureau of Reclamation, and the Corps of Army Engineers for the control of such programs is discussed in unusually frank terms.

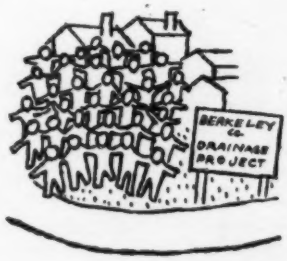
Concluding chapters describe the organization and functions of the numerous agencies that administer public lands, the uses of "Uncle Sam's Acres" by the public, and the policies and politics that influence their management.

—F. G. RENNER.

UNIQUE ADVERTISING.—To advertise a Wetzel County (W. Va.) program so named, the words "Greener Hills" are written on the slope of a pasture field of the Jennie Anderson farm at Knob Fork. The letters are 35 feet high and are here seen written with lime and fertilizer. Later "Greener Hills" showed up as dark green grass.

The work was done at the May meeting of the Wetzel County USDA council. Members present were Kathleen E. Stephenson, Dick Moore, Noel Cochran, Ralph Kittle, and Ted Starr. Also attending was I. E. Porterfield, assistant extension dairyman.

The First National Bank of New Martinsville sponsored the project.



PMA FUNDS FOR GROUP DRAINAGE.—Thirty-three Negro farmers, led by the Reverend W. M. Worley, obtained 100 percent assignment of PMA payments for a community drainage project in the Berkeley County (S. C.) Soil Conservation District. The group raised a sufficient amount to cover the remainder of the cost, and the money has been placed in the bank, according to Work Unit Conservationist J. S. Livingston. The proposed work will not only greatly benefit the community agriculturally, but will also materially improve health and road conditions.

SIMPLIFIED SOIL-MOISTURE COMPUTATION.—In irrigation and soils work, the usual procedure for computing soil moisture involves two steps: (1) Subtraction of the net dry weight from the net wet weight, and (2) dividing of the resulting difference (water) by the dry weight. The quotient is the percentage of moisture on the dry-weight basis.

So many of the people I have met are using this two-step procedure that I am convinced this practice must be widespread. I hope the following description of our simplified procedure will be of as great value to others as it has been to us.

Our current procedure involves only one computation. We omit step number 1 and merely divide the net wet weight by the net dry weight and obtain the soil moisture percentage by disregarding the first digit of the result. When the first digit (usually the figure 1) is disregarded, the balance of the quotient is exactly the same as that obtained by first subtracting, and then dividing. We've substituted the dropping of the digit for the subtraction in the first step.

Let us consider a sample whose wet weight was 187 grams and dry weight 159 grams. The water content is equal to 187 minus 159, or 28 grams. The weight of the water divided by the dry weight is 28/159 or 17.61 percent. The wet weight of 187 grams divided by 159 grams dry weight is equal to 117.61 percent. By simply disregarding the first digit, we get 17.61 percent.

—STEPHEN J. MECH.

"THANK YOU!"—On April 15, when Hugh Bennett arrived at the age of three score and ten, cards arrived from all parts of the United States bearing greetings and good wishes from more than 5,000 persons. They came from warm personal friends and admirers, all of whom by the mere fact of being friends of the Chief are obviously ardent conservationists.

In the last issue, SOIL CONSERVATION Magazine announced that Dr. Bennett would continue at the head of the Soil Conservation Service another year. The importance of this year, because of the present emergency, was emphasized. As one means of helping to conserve Dr. Bennett's time and energies for the urgent public tasks of the moment, this periodical now undertakes to transmit to these thousands of well-wishers the heartfelt appreciation of the Chief. He would very much like to acknowledge each greeting individually, but that is out of the question just now. He is anxious, however, for everyone who sent a card or other greeting to accept his thanks for adding pleasure to an eventful occasion, *and also for helping pile up the evidence of widespread concern for the future of our American land.*

U. S. GOVERNMENT PRINTING OFFICE: 1951

PROGRESS IN GRASSLAND FARMING.—One of the greatest things accomplished by the Holmes County Soil Conservation District has been to divert eroding hill land from row crops to grassland farming, according to Lute Ellison district farmer and manager of the livestock sales barn in Lexington, Miss. "This trend," Mr. Ellison told the Lexington Rotary Club recently, "is not only slowing down erosion, but is also helping materially to improve the economic conditions of our county. More than $2,000,000 worth of livestock passed through the local sales barn during 1950, and 60 percent of it was produced in Holmes County."

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111 SUBSCRIPTIONS.—Through the enterprise of five Salem County, N. J., farm-machinery dealers, 72 farmers, most of them in the South Jersey Soil Conservation District, have received 1-year paid subscriptions to SOIL CONSERVATION Magazine.

In sending this publication to these farmers as an aid in their conservation operations or as a spur to start conservation farming, the five farm-machinery dealers have shot the paid subscription total in Salem County to at least 111. Previously, the First National Bank of Elmer had sponsored subscription renewals to 29 district farmers and entered new subscriptions for 10 others. The machinery dealers are in the National Retail Farm Equipment Association, which is sparking a campaign in support of districts. They are the Owen Supply Co. of Woodstown, Pearson Supply Co. of Salem, Rudy Franzen of Monroeville, M. E. Foster of Elmer, and Leslie G. Fogg of Bridgeton. Roy Ballard, SCS work unit leader at Salem, handled the transaction in cooperation with the dealers.

MENDED THE RIPS.—Clarence Holcomb paid $25 per acre for a worn-out, gullied hillside farm near Pittsburg, Tex. His neighbors thought he was buying 110 acres of trouble. The farm wouldn't support a cow on 10 acres. The gullies were deep enough to hide a team of horses.

But in the spring of 1950, 10 acres of the hillside which was the worst guillied supported all his cattle most of the time over a 60-day period.

Holcomb is a supervisor of the Sulphur-Cypress Soil Conservation District. He is in a group of 16 neighbors who practice soil conservation with him. He has received two plaques in the Fort Worth Press "Save the Soil and Save Texas" awards program. The plaques are in recognition of his reclamation of a worn-out farm.

—TED CALVERT.

Note.—The essay below is one of 400 essays entered in a contest conducted in elementary and high schools by the Cheatham County (Tenn.) Soil Conservation District.

What Soil Conservation Means to Me

By Barbara Eleanor Langston, Age 12, Grade 7, Kingston Springs, Tenn., School

First, and of greatest importance, soil conservation means life to me. Every plant and animal takes things from the soil and then dies and returns the things which it has taken from the earth back into the soil. From the soil we get our food without which we would not be able to live. Soil produces plants which we eat to produce blood, bone, and skin. We get our food, clothing, and shelter by means of soil production. We must conserve our soil and turn it into a wise use. Our land and the way we use it may determine our future happiness. Therefore, soil conservation is important to me and everyone else in order to live on this earth. Soil is indeed our most important natural resource. If soil is misused it produces less and less.

Soil also means prosperity to me. It is my best friend and must be saved. When it is rich we have plenty of food. When it is poor, we are poor. No one likes to be poor. So we must learn to take care of our soil and treat it properly. We must learn to love our good earth.

We must conserve and protect our soil and not abuse our privilege of having a wonderful, prosperous, and peace-loving country for which our forefathers fought and died.

I can help plant trees, grass, and plants on worn spots of soil and help conserve and beautify it. I can help control soil erosion by stopping gullies and by building small dams. This is lots of fun too. I can also help conserve soil by helping to prevent forest fires. A forest fire can greatly injure the soil. Fire destroys growth, leaves, and waste which otherwise would be used for conserving and enriching the soil.

To me, conserving soil means living a full, healthy, and profitable life which otherwise we would not be able to enjoy.

UP THEY WENT!—A farmer in the Dry Creek (Idaho) Soil Conservation District was asked if operation of the district has increased his taxes. "Yes, it has," he replied. "My income taxes."